



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

MEMORANDUM

DATE: October 21, 1982

TO: DWPC/FOS & RU

FROM: Steve Baldwin, DWPC/FOS, Region 4 *SB*

SUBJECT: DEWITT COUNTY - Revere Copper & Brass, Inc.
Copper Spill Investigation Report

EPA Region 5 Records Ctr.



315340

Phone call received by this writer at 10:15 a.m. this date from John Perry of EAC advising of spill at subject facility in Clinton. Preliminary information provided to Perry by Revere indicated spilled material was an aqueous solution of H_2SO_4 and $CUSO_4$. Approximately 1,000 gallons had been spilled and approximately 600 gallons had reportedly reached the stream, an unnamed tributary of Coon Creek.

I then phoned Revere (Tony Taubert) for additional information regarding the incident. Based on information obtained from Taubert, I then phoned the Clinton Sanitary District (Morris Lockard) and advised him of the spill and indicated that although it was reported that the spill had gone into a storm sewer District Staff should be advised to monitor the WWTF influent for unusual conditions.

Bob Cottingham of IDOC phoned and I indicated response by Fish Biologist apparently not warranted yet but would be requested if my field investigation noted fish kill.

I responded to the incident on 10/21/82. The weather was sunny, cool and dry. My observations and activities follow:

12:00 noon (approximately) - Arrived at Clinton Sanitary District WWTF. Observed Coon Creek and noted no particular unusual conditions. Plant effluent flow rate (for dilution purposes) running approximately 0.8 MGD. Sanitary District had collected stream sample at approximately 11:00 a.m. Found 0.65 mg/l Cu and pH of 7.2. I then began a stream sampling run.

12:55 p.m. - Collected sample from Salt Creek at bridge located in the SE $\frac{1}{4}$, Sec. 07, T.19N. - R.2E. This location is just downstream of the mouth of Coon Creek approximately $3\frac{1}{2}$ miles downstream of the spill site. No unusual conditions were noted. Creek at this point was approximately 50' wide, 10" deep, velocity at 2 FPS. (Sampling Point No. 1)

1:00 p.m. - Collected sample from Coon Creek at bridge located in S.W. $\frac{1}{4}$, Sec. 08, T.19N. - R.2E. This location is just upstream of the mouth of Coon Creek with Salt Creek, approximately $3\frac{1}{2}$ miles downstream of the spill site. No unusual conditions were noted. Coon Creek at this point was approximately 15' wide, 4"-6" deep, velocity 1 FPS. (Sampling Point No. 2).

1:10 p.m. - Continued back upstream and collected a sample from Coon Creek at bridge located on an East-West blacktop road in the S.E. $\frac{1}{4}$, Sec. 05, T.19N.-R.2E. This location is approximately 2 miles downstream of the spill site. No unusual conditions were noted. Live minnows were observed. No obvious distress was exhibited. (Sampling Point No. 3)

1:25 p.m. - Collected sample from Coon Creek at point located approximately 200' downstream of Sanitary District WWTF effluent in the N.W. $\frac{1}{4}$, Sec. 03, T.19N.-R.2E, approximately $\frac{1}{2}$ mile downstream of the spill site. No unusual conditions noted. (Sampling Point No. 4)

1:31 p.m. - Collected sample from Coon Creek at point located approximately 200' upstream of Sanitary District WWTF effluent. No unusual conditions noted. (Sampling Point No. 5).

I then took those samples to the Clinton Sanitary District for Cu and pH analyses by District Staff. Results reported below:

Sampling Point	Cu(mg/l)	pH (units)
1	0.05	7.2
2	0.02	7.8
3	0.02	7.8
4	0.19	7.5
5	0.45	7.5

These results were then relayed to Jim Kelty via phone. Kelty advised that a Livestock Watering Alert had been posted and that a Mrs. Alstadt who lives a short distance downstream of the spill site had phoned and had expressed anger over the matter and the fact that there have been spills and/or discharges in the past and she contends the Agency has not done anything about them.

I then resumed stream sampling, working my way upstream toward the spill site.

2:40 p.m. - Collected sample from estimated 20" diameter tile which discharges to railroad ditch west of Revere plant. This tile is Outfall No. 002 as identified in Revere's NPDES Permit No. IL0002356. The discharge was a blue-green color and contained flocculant suspended particles. The discharge flow rate was estimated at 25 GPM. Downstream from the discharge, the water was the same blue-green color. Flocculant bottom deposits were observed. (Sampling Point No. 6)

2:50 p.m. - Collected sample from the railroad ditch at a point approximately 100' downstream of the discharge tile. Water was blue-green color and flocculant bottom deposits were observed (Sampling Point No. 7). At that point, I was met by Mr. Mark Lambert, editor of the Clinton Daily Journal newspaper (935-3171). He questioned me regarding the incident and took photographs.

2:55 p.m. - Collected sample of the discharge from Revere's treatment lagoon system prior to its mixing with the flow in the railroad ditch. No unusual conditions were observed at this location (Sampling Point No. 8).

3:05 p.m. - Went back downstream approximately 500' to the bridge on South Madison Street and collected a sample. The water in the ditch at this point was slightly murky in appearance but no other obviously unusual conditions were noted (Sampling Point No. 9).

At that time, I was met by Mrs. Alstadt and Mrs. Steve Buchanan. Alstadt lives on the south side of the ditch and Buchanan on the north side. Both women, particularly Mrs. Alstadt complained that the pollution of the ditch has been going on for years. Alstadt said that she has complained to the Agency regarding the condition of the water but said that the Agency has not been responsive. She indicated that Tim Bachman (former Region 4 staffer) had contacted her and said that the problem would be taken care of. Supposedly, she has had cattle die, supposedly as a result of the water. She and Buchanan said that they have heard from Revere employees that Revere drains "acid" into the stream at night, etc., etc. I said that I was unable to respond to her allegations that the Agency has not been responsive to her prior complaints since I did not recall having any firsthand knowledge of those situations; however, there might be record of the specific complaints in the files. Regarding the nighttime dumping by Revere, I said that we do not have resources to be everywhere at the same time. I also said that people should not be too quick to point a finger at Revere every time they see something unusual in the ditch, afterall there are other facilities in the area which have capability of discharging pollutants (specifically Marco Fertilizer and neighboring Ready-Mix concrete plant, however I did not name names to Alstadt).

I then went to the Revere plant and contacted Tony Taubert, Emergency Response Coordinator and Robert D. Long, Personnel Manager. They provided me with a tour of the specific area of the plant where the incident occurred and also the following explanation of the circumstances:

- 1) If, during quality control inspection, defective copper plating is noted on the bottoms of pots and pans, the defective plating is removed and then the piece is re-plated if possible.

2) The defective copper plating is removed in two, 500-gallon "dip off" tanks containing an aqueous solution of H_2SO_4 and H_2O_2 . As needed, the spent solution, which now contains copper, is pumped from the two, 500-gallon tanks into two, 6,000-gallon capacity above ground storage tanks located outside the building on the north side. Pumpage is via a manually controlled (off-on) pump which Taubert estimates to be of 30 GPM capacity. The two, 6,000-gallon storage tanks are equipped with high liquid level audio alarm monitoring equipment. Ultimately, the spent solution is disposed of under a R.C.R.A. permit according to Taubert.

3) Sometime between the hours of 12:01 a.m. and 6:00 a.m. on 10/21/82, plant personnel started the transfer pump and pumped the contents of the two, 500-gallon "dip off" tanks out to the "east" storage tank. According to Taubert, the high liquid level alarm system was not and had not been in an operational status for some period of time and if I understood him, the necessary replacement parts were on order. In the meantime, Taubert said that it was standard operating procedure for the person operating the transfer pump to check the storage tank to insure that adequate remaining capacity existed before starting the transfer pump. Apparently, this visual check was not made on the date of this incident and as a result, the storage tank was overfilled. The solution overflowed the top of the tank via an access manhole and entered a storm water inlet located approximately 75' away.

4) Sorbant material pillows were deployed in the area of the storm water inlet and Taubert estimates that approximately 400 gallons of the solution was recovered before it entered the storm water inlet. The sorbant material had been placed into plastic barrels for disposal. Taubert said that he would be contacting the DLPC regarding disposal of this material.

5) At my suggestion, Taubert agreed to make a good faith effort to attempt to clean up the blue-green bottom deposits in the vicinity of the discharge pipe. He further indicated that he would be making a written report to the Agency in accordance with the NPDES permit.

My camera was not functioning, so Mr. Long took a photo with a polaroid camera to show the outside storage tanks.

On 10/22/82, I returned to the area for the purpose of collecting additional samples. Again, the weather was sunny, cool and dry. Samples were collected in the same general location as they had been the day before. The samples were taken to the Clinton Sanitary District for Cu and pH analyses by District staff. Results reported on attached summary sheet. Note that Sample No. 10 is a sample of the city public water collected at the Sanitary District.

Upon completion of these tests by the Sanitary District, I phoned the results to Jim Kelty of EAC at approximately 1:30 p.m.

During this re-sampling on 10/22, I noted that Revere had taken action to clean up the blue-green bottom deposits from the ditch in the vicinity of the discharge. Regarding the discharge from NPDES Outfall No. 002, I noted that the flow was fairly clear in appearance.

Upon my return to the office on 10/22, Jim Kelty phoned at 4:10 p.m. advising that based on the preliminary lab results and discussions with Dr's Buck and Beaseley of the U of I Vet. Medicine Toxicology Dept. a decision had been made to lift the Livestock Watering Alert since Buck and Beaseley were of the opinion that the Cu levels being detected were not of any particular hazard to livestock, the maximum safe level being approximately 15 mg/l.

Taubert submitted a NPDES N.O.N. on 11/4/82. The N.O.N. was determined to be inadequate since it does not indicate action taken to prevent future discharges of this nature.

Based on this investigation, the following apparent violations are noted:

- 1) Discharge from 002 contained color and settleable solids (Sec. 304.106). Also caused water quality violation (Sec. 304.105).
- 2) Discharge from 002 caused receiving waterway to contain unnatural color and bottom deposits (Sec. 302.203).
- 3) Discharge from 002 caused copper content in receiving waterway to exceed 0.02 mg/l (Sec. 302.208).
- 4) Discharge from 002 exceeded NPDES permit copper limit of 1.0 (daily max.).
- 5) The N.O.N. submitted by Revere does not adequately address the requirements of Standard Condition Number 12 of the NPDES permit.

A letter is to be sent to Revere regarding this matter.

SEB:bh

cc: - DWPC/Enforcement - Attn: B Carlson
- DWPC/Region 4